



ELSEVIER

Comput. Methods Appl. Mech. Engrg. 113 (1994) 415-416

**Computer methods  
in applied  
mechanics and  
engineering**

## Author index of Volume 113

- Argyris, J. and L. Tenek, Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method 207-251
- Belytschko, T. and I. Leviathan, Physical stabilization of the 4-node shell element with one point quadrature 321-350
- Belytschko, T., see Lu, Y.Y. 397-414
- Dantzig, J.A., see Tortorelli, D.A. 141-155
- Dantzig, J.A., see Tortorelli, D.A. 157-172
- Droux, J.-J. and T.J.R. Hughes, A boundary integral modification of the Galerkin least squares formulation for the Stokes problem 173-182
- Edgar, N.B. and K.S. Surana, *p*-Version least squares finite element formulation for axisymmetric incompressible non-Newtonian fluid flow 271-300
- Felippa, C.A., A survey of parametrized variational principles and applications to computational mechanics 109-140
- Grosh, K. and P.M. Pinsky, Complex wave-number dispersion analysis of Galerkin and Galerkin least squares method for fluid-loaded plates 67- 98
- Gu, L., see Lu, Y.Y. 397-414
- Guillard, H., see Nkonga, B. 183-204
- Hauke, G. and T.J.R. Hughes, A unified approach to compressible and incompressible flows 389-395
- Hughes, T.J.R., see Droux, J.-J. 173-182
- Hughes, T.J.R., see Johan, Z. 363-387
- Hughes, T.J.R., see Hauke, G. 389-395
- Hulbert, G.M., A unified set of single-step asymptotic annihilation algorithms for structural dynamics 1- 9
- Johan, Z., K.K. Mathur, S.L. Johnsson and T.J.R. Hughes, An efficient communications strategy for finite element methods on the Connection Machine CM-5 system 363-387
- Johnsson, S.L., see Johan, Z. 363-387
- Lee, C.Y. and J.T. Oden, A posteriori error estimation of *h-p* finite element approximations of frictional contact problems 11- 45
- Leviathan, I., see Belytschko, T. 321-350
- Lu, Y.Y., T. Belytschko and L. Gu, A new implementation of the element free Galerkin method 397-414

- Mathur, K.K., see Johan, Z. 363-387
- Miehe, C., see Wriggers, P. 301-319
- Morthland, T.E., see Tortorelli, D.A. 157-172
- Nkonga, B. and H. Guillard, Godunov type method on non-structured meshes for three-dimensional moving boundary problems 183-204
- Oden, J.T., see Lee, C.Y. 11- 45
- Paramasivam, V. and D.M. Raj, Shear-deformable axisymmetric conical shell element with 6-DOF and convergence of  $O(h^4)$  47- 54
- Pinsky, P.M., see Grosh, K. 67- 98
- Raj, D.M., see Paramasivam, V. 47- 54
- Sastri, V.M.K., see Srinivas Rao, M.S.S. 263-269
- Semper, B., Numerical crosswind smear in the streamline diffusion method 99-108
- Silva Neto, A.J. and R.E. White, Numerical control of the Stefan problem: Maximum melting 351-362
- Srinivas Rao, M.S.S. and V.M.K. Sastri, Natural convection heat transfer in staggered vertical channels 263-269
- Sui Yun-kang, The expansion of functions under transformation and its application to optimization 253-262
- Surana, K.S., see Edgar, N.B. 271-300
- Tenek, L., see Argyris, J. 207-251
- Tiller, M.M., see Tortorelli, D.A. 141-155
- Tomasko, J.A., see Tortorelli, D.A. 157-172
- Tortorelli, D.A., M.M. Tiller and J.A. Dantzig, Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain with applications to process optimization 141-155
- Tortorelli, D.A., J.A. Tomasko, T.E. Morthland and J.A. Dantzig, Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain with applications to casting optimization 157-172
- White, R.E., see Silva Neto, A.J. 351-362
- Wriggers, P. and C. Miehe, Contact constraints within coupled thermomechanical analysis—A finite element model 301-319
- Zhang, S., see Zhang, Z. 55- 65
- Zhang, Z. and S. Zhang, Wilson's element for the Reissner-Mindlin plate 55- 65



ELSEVIER

Comput. Methods Appl. Mech. Engrg. 113 (1994) 417-420

---

---

**Computer methods  
in applied  
mechanics and  
engineering**

---

---

## Subject index of Volume 113

### *Calculus of variations*

- A survey of parametrized variational principles and applications to computational mechanics, C.A. Felippa 109-140

### *Coupled problems*

- Complex wave-number dispersion analysis of Galerkin and Galerkin least-squares methods for fluid-loaded plates, K. Grosh and P.M. Pinsky 67- 98  
Natural convection heat transfer in staggered vertical channels, M.S.S. Srinivas Rao and V.M.K. Sastri 263-269  
Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319

### *Design of programs*

- Numerical control of the Stefan problem: Maximum melting, A.J. Silva Neto and R.E. White 351-362

### *Dynamics*

- A unified set of single-step asymptotic annihilation algorithms for structural dynamics, G.M. Hulbert 1- 9

### *Elasticity*

- A posteriori error estimation of  $h$ - $p$  finite element approximations of frictional contact problems, C.Y. Lee and J.T. Oden 11- 45  
Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207-251

### *Finite difference methods*

- Complex wave-number dispersion analysis of Galerkin and Galerkin least-squares methods for fluid-loaded plates, K. Grosh and P.M. Pinsky 67- 98  
Numerical crosswind smear in the streamline diffusion method, B. Semper 99-108  
Godunov type method on non-structured meshes for three-dimensional moving boundary problems, B. Nkonga and H. Guillard 183-204  
Natural convection heat transfer in staggered vertical channels, M.S.S. Srinivas Rao and V.M.K. Sastri 263-269

### *Finite element and matrix methods*

- A posteriori error estimation of  $h$ - $p$  finite element approximations of frictional contact problems, C.Y. Lee and J.T. Oden 11- 45  
Shear-deformable axisymmetric conical shell element with 6-DOF and convergence of  $O(h^4)$ , V. Paramasivam and D.M. Raj 47- 54  
Wilson's element for the Reissner-Mindlin plate, Z. Zhang and S. Zhang 55- 65  
Complex wave-number dispersion analysis of Galerkin and Galerkin least-squares methods for fluid-loaded plates, K. Grosh and P.M. Pinsky 67- 98

- Numerical crosswind smear in the streamline diffusion method, B. Semper 99-108
- A survey of parametrized variational principles and applications to computational mechanics, C.A. Felippa 109-140
- Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain with applications to process optimization, D.A. Tortorelli, M.M. Tillier and J.A. Dantzig 141-155
- Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain with applications to casting optimization, D.A. Tortorelli, J.A. Tomasko, T.E. Morthland and J.A. Dantzig 157-172
- A boundary integral modification of the Galerkin least squares formulation for the Stokes problem, J.-J. Droux and T.J.R. Hughes 173-182
- Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207-251
- p*-Version least squares finite element formulation for axisymmetric incompressible non-Newtonian fluid flow, N.B. Edgar and K.S. Surana 271-300
- Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319
- Physical stabilization of the 4-node shell element with one point quadrature, T. Belytschko and I. Leviathan 321-350
- An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes 363-387
- A unified approach to compressible and incompressible flows, G. Hauke and T.J.R. Hughes 389-395
- A new implementation of the element free Galerkin method, Y.Y. Lu, T. Belytschko and L. Gu 397-414

### *Fluid mechanics*

- Numerical crosswind smear in the streamline diffusion method, B. Semper 9-108
- A boundary integral modification of the Galerkin least squares formulation for the Stokes problem, J.-J. Droux and T.J.R. Hughes 173-182
- Godunov type method on non-structured meshes for three-dimensional moving boundary problems, B. Nkonga and H. Guillard 183-204
- A unified approach to compressible and incompressible flows, G. Hauke and T.J.R. Hughes 389-395
- An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes 363-387

### *Gas dynamics*

- An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes 363-387
- A unified approach to compressible and incompressible flows, G. Hauke and T.J.R. Hughes 389-395

### *General Rayleigh-Ritz and Galerkin techniques*

- A unified approach to compressible and incompressible flows, G. Hauke and T.J.R. Hughes 389-395
- A new implementation of the element free Galerkin method, Y.Y. Lu, T. Belytschko and L. Gu 397-414

*Heat and diffusion*

- Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain with applications to process optimization, D.A. Tortorelli, M.M. Tiller and J.A. Dantzig 141-155
- Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain with applications to casting optimization, D.A. Tortorelli, J.A. Tomasko, T.E. Morthland and J.A. Dantzig 157-172
- Natural convection heat transfer in staggered vertical channels, M.S.S. Srinivas Rao and V.M.K. Sastri 263-269
- Numerical control of the Stefan problem: Maximum melting, A.J. Silva Neto and R.E. White 351-362

*Incompressible and near incompressible media*

- A boundary integral modification of the Galerkin least squares formulation for the Stokes problem, J.-J. Droux and T.J.R. Hughes 173-182
- p*-Version least squares finite element formulation for axisymmetric incompressible non-Newtonian fluid flow, N.B. Edgar and K.S. Surana 271-300
- A unified approach to compressible and incompressible flows, G. Hauke and T.J.R. Hughes 389-395

*Modern computer architecture*

- An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnson and T.J.R. Hughes 363-387

*Nonlinear mechanics*

- A posteriori error estimation of *h-p* finite element approximations of frictional contact problems, C.Y. Lee and J.T. Oden 11- 45
- Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207-251
- Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319

*Numerical solution procedures*

- A unified set of single-step asymptotic annihilation algorithms for structural dynamics, G.M. Hulbert 1- 9
- Godunov type method on non-structured meshes for three-dimensional moving boundary problems, B. Nkonga and H. Guillard 183-204
- Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207-251
- Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319
- Physical stabilization of the 4-node shell element with one point quadrature, T. Belytschko and I. Leviathan 321-350
- A new implementation of the element free Galerkin method, Y.Y. Lu, T. Belytschko and L. Gu 397-414

*Optimization*

- Optimal design of nonlinear parabolic systems. Part I: Fixed spatial domain with applications to process optimization, D.A. Tortorelli, M.M. Tiller and J.A. Dantzig 141-155
- Optimal design of nonlinear parabolic systems. Part II: Variable spatial domain with applications to casting optimization, D.A. Tortorelli, J.A. Tomasko, T.E. Morthland and J.A. Dantzig 157-172

*Optimization and design of structures*

- The expansion of functions under transformation and its application to optimization, Sui Yun-kang 253-262

*Phase changes*

- Numerical control of the Stefan problem: Maximum melting, A.J. Silva Neto and R.E. White 351-362

*Plasticity*

- Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319

*Shells and plates*

- Shear-deformable axisymmetric conical shell element with 6-DOF and convergence of  $O(h^4)$ , V. Paramasivam and D.M. Raj 47- 54  
 Wilson's element for the Reissner-Mindlin plate, Z. Zhang and S. Zhang 55- 65  
 Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207-251  
 Physical stabilization of the 4-node shell element with one point quadrature, T. Belytschko and I. Leviathan 321-350

*Structural mechanics*

- A unified set of single-step asymptotic annihilation algorithms for structural dynamics, G.M. Hulbert 1- 9  
 Shear-deformable axisymmetric conical shell element with 6-DOF and convergence of  $O(h^4)$ , V. Paramasivam and D.M. Raj 47- 54  
 Wilson's element for the Reissner-Mindlin plate, Z. Zhang and S. Zhang 55- 65  
 Linear and geometrically nonlinear bending of isotropic and multilayered composite plates by the natural mode method, J. Argyris and L. Tenek 207-251  
 A new implementation of the element free Galerkin method, Y.Y. Lu, T. Belytschko and L. Gu 397-414

*Subsonic flow*

- p*-Version least squares finite element formulation for axisymmetric incompressible non-Newtonian fluid flow, N.B. Edgar and K.S. Surana 271-300

*Supersonic flow*

- An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes 363-387

*Thermal effects and thermodynamics*

- Contact constraints within coupled thermomechanical analysis—A finite element model, P. Wriggers and C. Miehe 301-319

*Transonic flow*

- An efficient communications strategy for finite element methods on the Connection Machine CM-5 system, Z. Johan, K.K. Mathur, S.L. Johnsson and T.J.R. Hughes 363-387

*Viscous flow*

- A boundary integral modification of the Galerkin least squares formulation for the Stokes problem, J.-J. Droux and T.J.R. Hughes 173-182  
 A unified approach to compressible and incompressible flows, G. Hauke and T.J.R. Hughes 389-395

